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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DUONG, THOI V

ART UNIT PAPER NUMBER

2871

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,732

Applicant(s)

SLADEN, PETER

Examiner

Thoi V Duong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 ~~is/are~~ pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 ~~is/are~~ rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the Amendment filed August 09, 2004.

Accordingly, claims 1, 7 and 13 were amended, and new claims 16-22 were added. Currently, claims 1-22 are pending in this application.

Response to Arguments

2. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 18 is objected to because of the following informalities: claim 18 recites the limitation "the display window" in line 2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

4. Claim 19 is objected to because of the following informalities: claim 19 recites the limitation "the display window" in line 2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

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Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-3, 6-9, 11, 12 and 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe et al. (USPN 6,243,150 B1).

Re claim 1, as shown in Fig. 6, Watanabe et al. discloses a display window 4 (tablet) for placement in registration with a display 2 so that the display is viewable through the window (col. 4, lines 57-60), wherein a first outer surface 4e of the window is for exposure to a user, and a second outer surface (lower surface of a lower substrate 4a) of the window is for placement adjacent the display, the second outer surface being provided with an incorporated grating 4h to distribute light from an associated source 5 of illumination in the direction of the display,

wherein, re claim 2, the display window 4 is for use with a Liquid Crystal Display (LCD) (col. 4, lines 49-53);

wherein, re claim 3, the grating 4h is in the form of a surface comprising a plurality of triangular projections;

wherein, re claim 6, the window 4 comprises a polycarbonate material (col. 5, lines 14-15); and

wherein, re claim 20, the incorporated grating 4h has a non-uniform, symmetric distribution for distributing light (col. 8, lines 21-39).

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Re claim 7, as shown in Fig. 6, Watanabe et al. discloses a display assembly comprising:

a display 2;

an illumination source 5; and

a display window 4 disposed adjacent the display, and through which the display is viewable, wherein an outer surface of the window (lower surface of a lower substrate 4a) facing the display is provided with an incorporated grating 4h for distributing light from the illumination source in the direction of the display,

wherein, re claim 8, the display 2 is a Liquid Crystal Display (LCD) (col. 4, lines 49-53);

wherein, re claim 9, the illumination source is disposed between the display window and the display;

wherein, re claim 11, the LCD is operable in reflective mode (col. 4, lines 49-53);
and

wherein, re claim 12, the grating 4h comprises a plurality of grooves (col. 8, lines 29-34).

Re claim 18, the display assembly comprises a first part and a second part wherein the display window 4 is comprised in the first part of the assembly and the illumination source 5 is comprised in the second part.

Re claim 16, as shown in Fig. 6, Watanabe et al. discloses a display window 4 for placement in registration with the display so that the display is visible through the window (col. 4, lines 57-60), wherein a first outer surface 4e of the window is for

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exposure to a user, and a second outer surface of the window (lower surface of a lower substrate 4a) is for placement adjacent the display without an intervening layer of material therebetween, the second outer surface being provided with an incorporated grating 4h to distribute light from an associated source 5 of illumination in the direction of the display without passing through an intervening layer of material.

Re claim 17, as shown in Fig. 6, Watanabe et al. discloses a display assembly comprising:

a display 2

an illumination source 5, and

a display window 4 disposed adjacent the display without an intervening layer of material therebetween, and through which the display is viewable, wherein an outer surface of the window (lower surface of a lower substrate 4a) facing the display is provided with an incorporated grating 4h for distributed light from the illumination source in the direction of the display without passing through an intervening layer of material.

Re claim 19, as shown in Fig. 1, the display assembly comprises a first part and a second part wherein the display window 4 is comprised in the first part of the assembly and the illumination source 5 is comprised in the second part (col. 5, lines 18-30).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (USPN 6,243,150 B1) in view of Li et al. USPN 6,504,582 B1).

Watanabe et al. discloses a display window that is basically the same as that recited in claim 4 except for the first surface of the display window provided with a

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coating. As shown in Fig. 1, Li et al. discloses a touch screen 12 coated with a scratch resistant layer 22 to minimize or prevent damage to the display (col. 3, lines 54-61).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display window of Watanabe et al. with the teaching of Li et al. by providing a toughened coating on the first surface of the display window so as to minimize or prevent damage to the display (col. 3, lines 54-61).

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (USPN 6,243,150 B1) in view of Sawai et al. (USPN 6,020,945).

Watanabe et al. discloses a display window that is basically the same as that recited in claim 5 except for the first surface of the display window provided with an anti-reflective coating. As shown in Fig. 1, Sawai et al. discloses a transparent touch screen 12 comprising an operating section 10. Sawai et al. teaches that an anti-reflective coating is applied to the surface of the operating section to prevent the reflection of the external light in a visible range (col. 1, lines 52-61).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display window of Watanabe et al. with the teaching of Li et al. by providing an anti-reflective coating on the first surface of the display window to prevent the reflection of the external light in a visible range (col. 1, lines 52-61).

9. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai (USPN 6,398,379 B1) in view of Watanabe et al. (USPN 6,243,150 B1).

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Re claim 13, as shown in Figs. 1- 4, Imai discloses a portable telephone comprising:

a housing 24;

a light source 4 and

a display 12,

wherein, re claim 14, the housing is a front cover of the telephone; and

wherein, re claim 15, the housing comprises a window 8 which is integrally formed with the housing 24.

Imai discloses a portable telephone that is basically the same as that recited in claim 13 except for a window with first and second outer surfaces, wherein the first outer surface defines an exterior surface at the portable telephone and the second outer surface, which faces the display, is provided with an incorporated grating for distributing light from the light source onto the display.

As shown in Figs. 1 and 6, Watanabe et al. discloses a liquid crystal display device comprising:

a housing 6;

a light source 5 and

a display 2,

wherein the housing comprises a window 4 with first and second outer surfaces, wherein the first outer surface 4e defines an exterior surface of the display and the second outer surface (lower surface of a substrate 4a), which faces the display, is

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provided with an incorporated grating 4h for distributing light from the light source onto the display.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the portable telephone of Imai by employing the window of Watanabe et al. to obtain a sufficient illumination for the entire effective display region of the display (col. 3, lines 1-3).

10. Claims 10, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (USPN 6,243,150 B1) in view of Ohkawa (USPN 6,671,013 B1).

Watanabe et al. discloses a display window that is basically the same as that recited in claims 10, 21 and 22 except for a further illumination source wherein the incorporated grating has a non-uniform, symmetric distribution for distributing light from the illumination sources.

As shown in Fig. 9, Ohkawa discloses a light guide plate 60 and light sources L6 and L7 provided with LED, wherein a great number of projections 20 has a non-uniform, symmetric distribution for distributing light from the illumination sources.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display window of Watanabe et al. with the teaching of Ohkawa by employing a further illumination source and an incorporated grating having a non-uniform, symmetric distribution for distributing light from the illumination sources so as to obtain a uniform brightness for the display (col. 10, lines 49-56).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong



11/01/2004



TARIFUR R. CHOWDHURY
PRIMARY EXAMINER